



# 40CG Indoor Unit/38CG Outdoor Unit 40CS Indoor Unit/38CS Outdoor Unit Console and Underceiling Duct Free Systems

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## Installation and Start-Up Instructions

**NOTE:** Read the entire instruction manual before starting the installation.

### TABLE OF CONTENTS


SAFETY CONSIDERATIONS .....	1
INTRODUCTION .....	1
General .....	1
Electrical Requirements .....	1
Indoor and Outdoor Unit Location .....	1
Outdoor Unit .....	4
Indoor Unit (General) .....	4
INSTALLATION .....	4
Installing the Indoor Unit (Console) .....	4
Refrigerant Line Routing .....	4
Installing the Mounting Bracket .....	5
Drilling a Hole in the Wall for Drainage and Inter-Unit Connections .....	5
Wiring the Indoor Unit .....	5
Drainage .....	5
Attaching the Remote Controller Rack .....	5
Ceiling Installation .....	5
Installing the Indoor Unit—Under Ceiling .....	5
Mounting the Air Conditioner On the Bracket .....	5
Continuing the Installation .....	7
Installing the Outdoor Unit .....	7
Wiring the Outdoor Unit .....	7
Connecting the Refrigerant Lines .....	7
Flaring and Connecting .....	7
Air Vacuum and Refrigerant Charge .....	7
Leak Test .....	8
Electrical Data and Connections .....	8
Two-Way Air Conditioner (Optional Accessory)	
—Console Only .....	8
Air Feedback System Installation (Optional)	
(Two-Way Air Conditioner) .....	10
START-UP PROCEDURES .....	10
Finishing the Job .....	10
Indoor Unit .....	11
Outdoor Unit .....	11
Explain the following items to the customer, with the aid of the User Manual: .....	11
CARE AND MAINTENANCE .....	12
Maintenance (Outdoor Unit) .....	12
Cleaning Coils .....	12
Maintenance (Indoor Unit) .....	12
Lubrication .....	12
To Remove And Clean Or Replace Air Filters .....	12
TROUBLESHOOTING .....	17

### SAFETY CONSIDERATIONS

Installation and servicing of this air conditioning equipment can be hazardous due to mechanical and electrical components. Only trained and qualified personnel should install, repair, or service air conditioning equipment.

Untrained personnel can perform basic maintenance functions such as cleaning and replacing air filters. All other operations must be performed by trained service personnel. When working on this equipment, observe precautions in the literature, on tags, on labels attached to or shipped with the unit and other safety precautions that may apply.

Follow all safety codes. Installation must be in compliance with local and national building codes. Wear safety glasses and work gloves. Have a fire extinguisher available during start-up and adjustment procedures and service calls.

Recognize safety information. This is the safety-alert symbol . When you see this symbol in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, or CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies a hazard that **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **would** result in personal injury or product or property damage.

### INTRODUCTION

#### Step 1—General

These instructions are intended as general guidelines. The air conditioner must be installed by trained and authorized personnel.

Use the following size copper tubing for connecting the outdoor and indoor units:

MODELS	COPPER TUBING SIZE (IN.)
38 & 40CG/CS-018	1/4 and 1/2
38 & 40CG/CS-024	3/8 and 5/8
38 & 40CG/CS-030	3/8 and 5/8

Installation must be performed in accordance with the manufacturer's specifications, using only approved tubing, electrical cables and accessories.

#### Step 2—Electrical Requirements

The air conditioner must be directly connected to an appropriate power source.

Use only Type "G" or "C" fuses, per Tables 4 and 5.

Use a single-length power cable, without extensions.

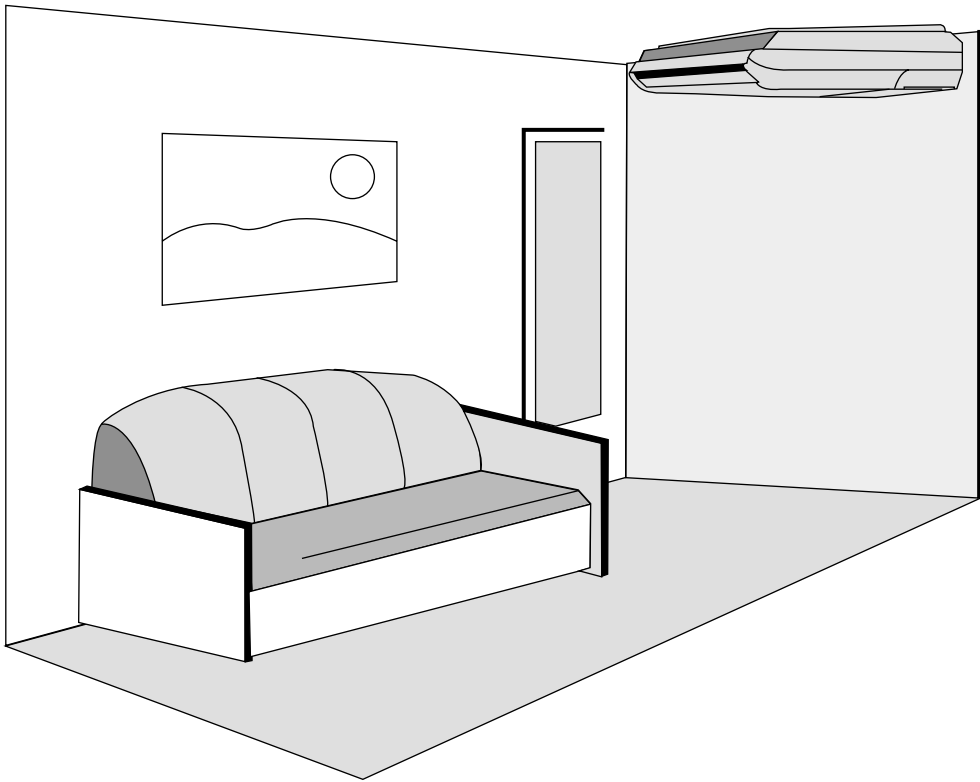
**NOTE:** All Wiring and power disconnects must meet local electrical codes. Control wires should be THHN 600v 18ga.

#### Step 3—Indoor and Outdoor Unit Location

The indoor and outdoor units should be installed as close to each other as possible.

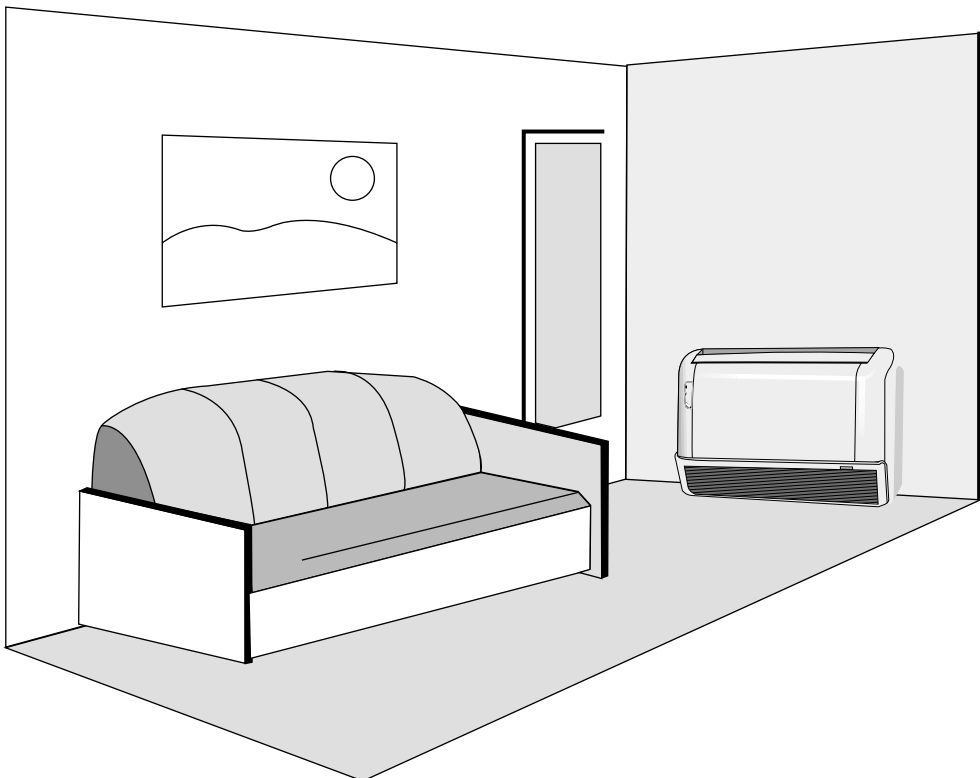
Do not exceed the tubing lengths and height differences which appear in Table 3.

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.



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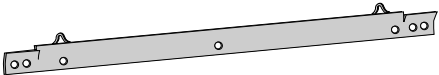
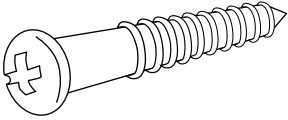

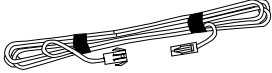

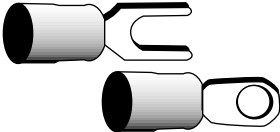
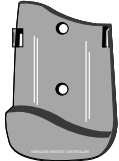

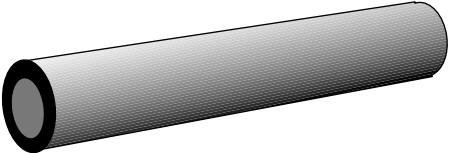
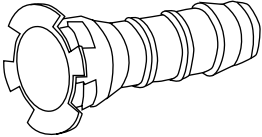
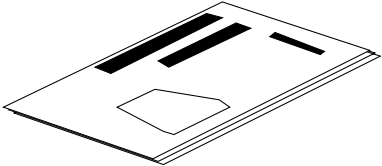
**Fig. 1—Ceiling Installation**



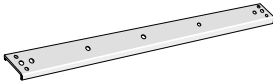
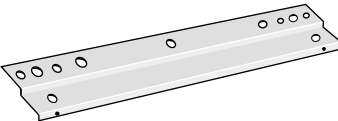
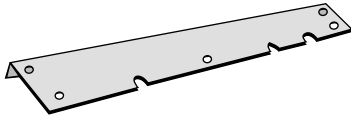
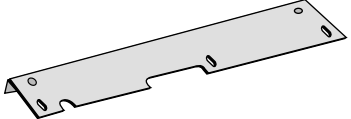
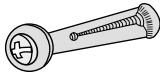



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**Fig. 2—Console Installation**

**Table 1—Standard Parts (Console)**

PART NAME	QTY	DIAGRAM
Mounting Bracket(s)	1	
Long Screws	9	
Nut	2	
Outdoor Sensor Connecting Cable	1	
Absorption Cushions	4	
Electric Terminals	16	
Remote Controller Rack	1	
Remote Controller and Batteries	1	
Insulation for Fittings		
Drain Hose Adapter	1	
User Manual	1	

**Table 2—Standard Parts (Under Ceiling)**

PART NAME	QUANTITY	DIAGRAM
Upper and Lower Mounting Strips	2	
Right and Left Mounting Strips	2	
Left Side Strip	1	
Right Side Strip	1	
Anchor Screw (3/8-in. X 2-in.)	6	
Screw (UNC 10 X 2-in.)	8	
Nut (UNC 10)	8	
Metal Screw (#10–1/2-in.)	2	

**Table 3—Maximum Tubing Lengths and Heights**

INDOOR UNIT	OUTDOOR UNIT	LENGTH		HEIGHT	
		Mtr	Ft	Mtr	Ft
40CG/CS-018	38CG/CS-018	30	98	15	49
40CG/CS-024	38CG/CS-024	40	131	20	66
40CG/CS-030	38CG/CS-030	30	98	10	33

#### Step 4—Outdoor Unit

1. Make sure to leave sufficient space around the unit. See Fig. 3 for minimum required distances between the unit and nearby walls. **DO NOT BOX IN UNIT.**
2. Install the unit in a location with convenient access for service and maintenance purposes.
3. Position the unit to minimize motor noise which reaches the customer and neighbors.
4. In heating mode, water can form in the condenser. A drainage hose may be attached to the unit. Use an adapter as shown in Fig. 4.

#### Step 5—Indoor Unit (General)

1. Make sure to leave sufficient space around the unit. See Fig. 6 and Fig. 16 for minimum required distances between the unit and the ceiling, floor and surrounding walls.
2. Locate the unit to ensure free air flow around it.
3. For greater convenience, place the power disconnect near the unit on the right side.
4. Avoid installing the unit near a source of heat, such as direct sunlight, steam or a flame.
5. Install the unit in a location with convenient access to refrigerant line connections for service and maintenance purposes.

#### INSTALLATION

##### Step 1—Installing the Indoor Unit (Console)

##### REFRIGERANT LINE ROUTING

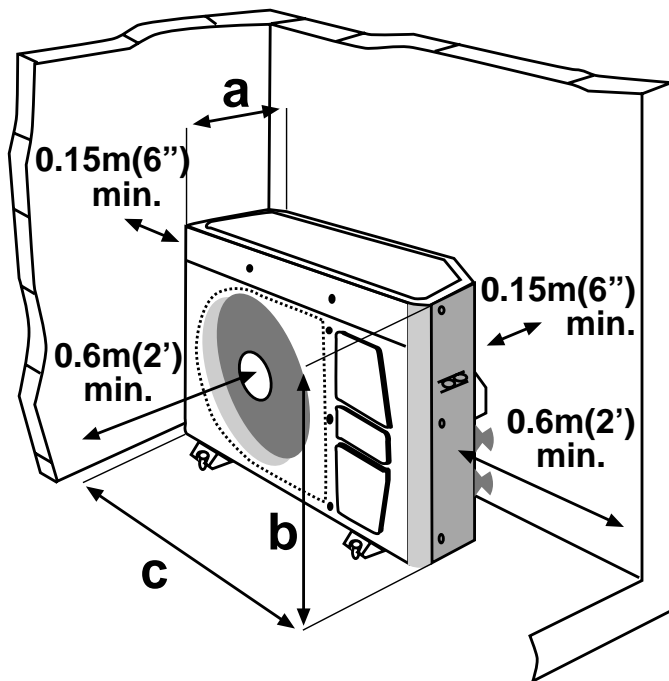
The refrigerant lines may be routed in either of the two directions shown in Fig. 7.

##### INSTALLING THE MOUNTING BRACKET

1. Carefully remove the air intake grille; remove the two screws at its sides and pull the grille out with its center retaining spring, as shown in Fig. 5.
2. Remove the seven screws which appear in Fig. 5 and remove the front panel.

**NOTE:** Make sure that the stepper motor and display cables are disconnected from the electronic control. (See Fig. 13.)

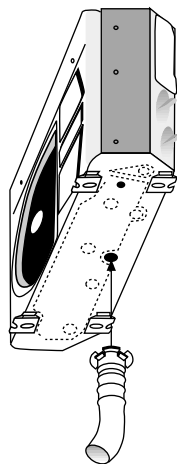
3. Position the mounting bracket on the wall and level.
4. Mark seven (minimum) drilling holes on the wall, as they appear in Fig. 8.
5. Drill the holes, insert the wall plugs and use the long screws to attach the mounting bracket to the wall.
6. Check that the bracket is level and securely fastened to the wall.
7. Hang unit on mounting bracket and mark (2) holes from the bottom of the unit for the hold down screws.



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UNIT	A	B	C
38CG/CS-018/024	9.8-in. (320mm)	25.2-in. (641mm)	35.4-in. (900mm)
38CG/CS-018/030	12.6-in. (320mm)	25.2-in. (641mm)	43.3-in. (1,100mm)

**Fig. 3—Dimensional Drawing (Outdoor Unit)**



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**Fig. 4—Drainage Adapter Connection**

8. Remove unit from bracket and install wall plugs. After attaching tubing and control/power wires. Remember to install (2) hold down screws at bottom of unit.

#### DRILLING A HOLE IN THE WALL FOR DRAINAGE AND INTER-UNIT CONNECTIONS

1. To make the connections between the indoor and outdoor units, a 3-in. hole should be drilled for the refrigerant lines, drainage hose and electric cables as shown in Fig. 9.
2. Make sure to drill outwards and downwards, so that the opening in the outside wall is at least 1/2-in. lower than the opening on the inside.
3. Make sure the drainage hose is at the bottom side of the hole. (See Fig. 9.)

4. Fill the remaining wall hole gap with an appropriate sealant material.

#### WIRING THE INDOOR UNIT

1. Route the inter-unit electric cable and the outdoor sensor cable towards the lower right corner of the indoor unit.
2. Use a screw driver to insert the stripped wire ends into the terminal block, as shown in Fig. 13.
3. Make sure that the wires are connected in accordance with the wiring diagram on the drain pan.
4. Attach the inter-unit electric cable with the cable clamp located on the unit.
5. Connect the Outdoor Sensor TH3 connector to its mating connector. (See Fig. 13.)

#### DRAINAGE

1. Connect the unattached end of the drainage tube to the drainage hose outlet.
2. Seal the drainage connection to prevent leakage.
3. Make sure there are no kinks, "U" bends or flattened sections in the tube.
4. Check that the drainage functions properly. Fill the pan below the unit's coil with water and observe that it drains out freely.
5. Connect the ends of the refrigerant lines to their appropriate fittings, following the guidelines in the "Connecting the Refrigerant Lines" section.
6. Make sure the drainage hose is at the bottom side of the wall hole. (See Fig. 9.)
7. Connect the display panel connector to the display panel printed circuit board. (See Fig. 13.)
8. Reassemble the front panel, using the seven screws which appear in Fig. 5.

#### ATTACHING THE REMOTE CONTROLLER RACK

Use the two screws supplied to attach the remote controller rack to the wall in the location selected by the customer. (See Fig. 12.)

#### CEILING INSTALLATION

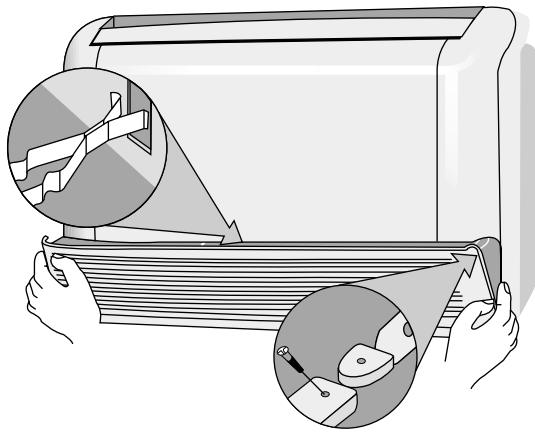
**IMPORTANT:** When performing a ceiling installation, make sure that Switch 1 on the Display Board is set to the ON position. (See Fig. 11.) The remaining switches are factory set and should not be changed.

#### Step 2—Installing the Indoor Unit—Under Ceiling

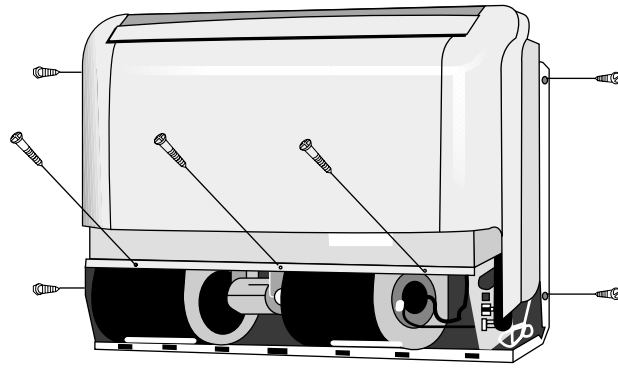
1. The tubing connecting the indoor and outdoor units can be routed in one of two directions, as shown in Fig. 16.
2. If the tubing is routed horizontally (direction no. 1), the pipe cover at the bottom of the air conditioner must be removed. (See Fig. 19.)
3. If the tubing is routed vertically (direction no. 2), a condensate pump must be installed for drainage.
4. To assemble the ceiling bracket, use the 4 mounting strips and the 8 UNC-10 screws and nuts, as shown in Fig. 17.
5. Fasten the ceiling bracket to the ceiling using the 6 anchor screws, as shown in Fig. 18.
6. The location of the ceiling bracket should allow a minimum gap between the indoor unit and nearby walls, as shown in Fig. 16.

**NOTE:** The anchor screws provided are intended for use with concrete ceilings.

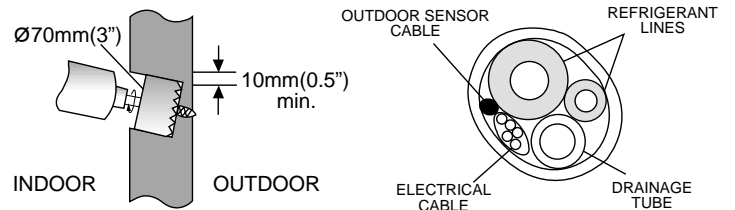
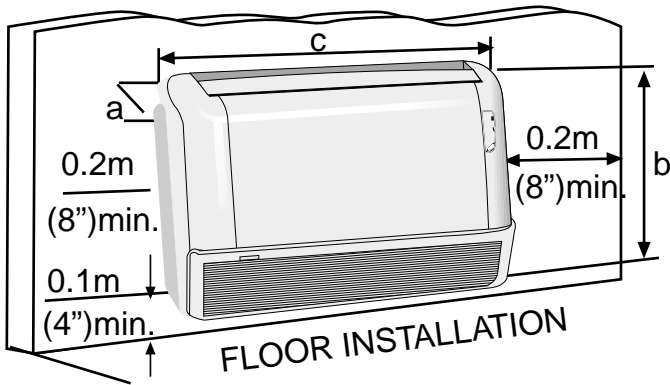
**NOTE:** Use fasteners which are appropriate for the type of ceiling present at the installation site.



**Fig. 5—Removing Air Intake Grille and Front Panel**



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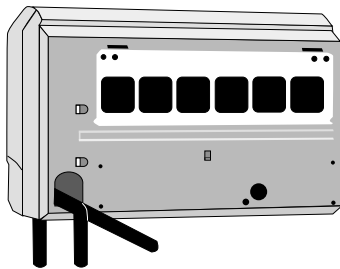
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**Fig. 9—Suggested Tubing Diameter and Contents**

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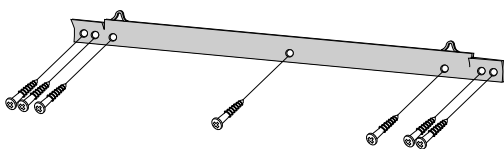
UNIT	A	B	C
40CG/CS-018	8.74-in. (225mm)	24-in. (610mm)	39.4-in. (1000mm)
40CG/CS-024/030	8.74-in. (225mm)	24-in. (610mm)	42.24-in. (1200mm)

**Fig. 6—Dimensional Drawing (Indoor Unit)**



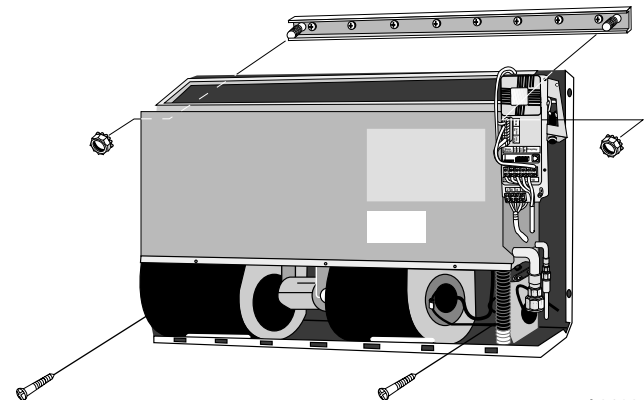
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**Fig. 7—Refrigerant Line Routing Options**



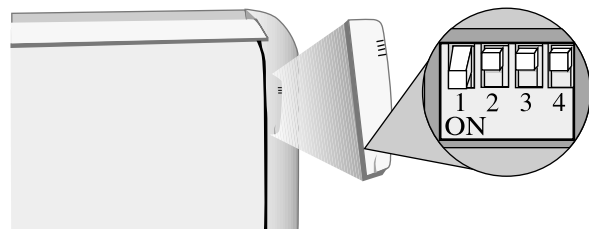
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**Fig. 8—Inserting Drilling Holes on Wall**



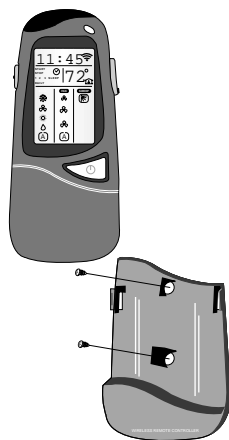
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**Fig. 10—Mounting Indoor Unit on Mounting Bracket**



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**Fig. 11—Switch 1 Factory Default ON Position**



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**Fig. 12—Remoter Controller and Rack**

### Step 3—Mounting the Air Conditioner On the Bracket

1. Remove the air conditioner front panel and air intake grille, as shown in Fig. 5.
2. Fasten the left and right side strips to the air conditioner using 6 sheet metal screws, as shown in Fig. 19. Ensure that:
  - a. The wide side of the strip is located at the bottom of the air conditioner.
  - b. The strip angle faces inward.
3. Mount the indoor unit on the bracket. Slide the protruding parts of the side strips onto the ceiling bracket so that the 4 safety screw holes on the left and right strips align with those on the ceiling bracket.
4. Make sure that the air conditioner is tilted slightly toward the drainage outlet on the right side. Use water to test for proper drainage. Fix the tilt by adjusting the height of the right strip relative to the left one.
5. Fasten the air conditioner to the ceiling bracket using the 4 side screws. (See Fig. 20.)

### Step 4—Continuing the Installation

After attaching the air conditioner to the ceiling bracket, continue the installation procedure in the previous section, titled “Drainage.”

**NOTE:** If the drainage is routed in direction no. 1, as shown in Fig. 16, cut out the oval opening in the air intake opening for the drainage tube and route the tube through the air intake grille. (See Fig. 21.)

**NOTE:** Set DIP switch no. 1 to the “ON” position. (See Fig. 11.) The other factory switches are set at the factory and should not be changed.

### Step 5—Installing the Outdoor Unit

1. The outdoor unit must be installed on a solid surface.
2. Make sure that the unit is level.
3. Fasten the outdoor unit legs to the base, as shown in Fig. 14. Place the rubber absorption cushions (supplied with the outdoor unit) under the unit’s legs to prevent vibrations.

### WIRING THE OUTDOOR UNIT

1. Remove the outdoor unit plastic side cover.
2. Loosen the screws on the terminal block.
3. Attach the electrical terminals supplied to the inter-unit control and power cable wires.
4. Connect the wires to the terminal block, in accordance with the coding which appears in Fig. 15.

5. Connect the outdoor sensor cable, making sure the connector is properly inserted.
6. Secure the inter-unit electric and sensor cable to the outdoor unit with the clamp shown in Fig. 14.
7. Reassemble the plastic side cover.

**NOTE:** A drainage tube can be connected to the outdoor unit to remove condensation formed during heating mode operation.

### **⚠ CAUTION**

Make sure that all screws and wires are properly fastened. Loose wires or connections can cause damage and present a fire hazard.

### Step 6—Connecting the Refrigerant Lines

1. To connect the refrigerant lines, use only “L” type sealed, dehydrated copper refrigerant tubing. No other type of tubing may be used. Use of other types of tubing will void the manufacturer’s warranty.
2. Do not open service valves or remove protective caps from tubing ends until all the connections are made.
3. Take care to avoid kinks or flattening of the tubing.
4. Bend tubing with special bending tools to avoid the formation of sharp bends.
5. Keep the tubing free of dirt, sand, moisture, and other contaminants to avoid damaging the refrigerant system.
6. Avoid sags in the suction line to prevent the formation of oil traps.
7. Insulate the tubing with 3/8-in. walled thermal pipe insulation. Inserting the tubing into the insulation before making the connections will save time and improve installation. The suction and liquid lines should never come in direct contact.

### FLARING AND CONNECTING

1. Remove the protective cap from the flare fitting.
2. Remove the protective cap from the tubing and cut to the required length. Make sure that the cut is perpendicular and clean, without burrs.
3. Slip the flare nut on the tubing and flare the tube end, using standard flaring tools.
4. Tighten the nut until resistance is met. Mark the nut and the fitting. Using a suitable wrench tighten an additional 1/4 turn. Use the following specified torque, according to connection size:

Liquid line:

1/4-in. - (12.3 ft/lb)

3/8-in. - (29 ft/lb)

Suction line:

1/2-in. - (36 ft/lb)

5/8-in. - (47 ft/lb)

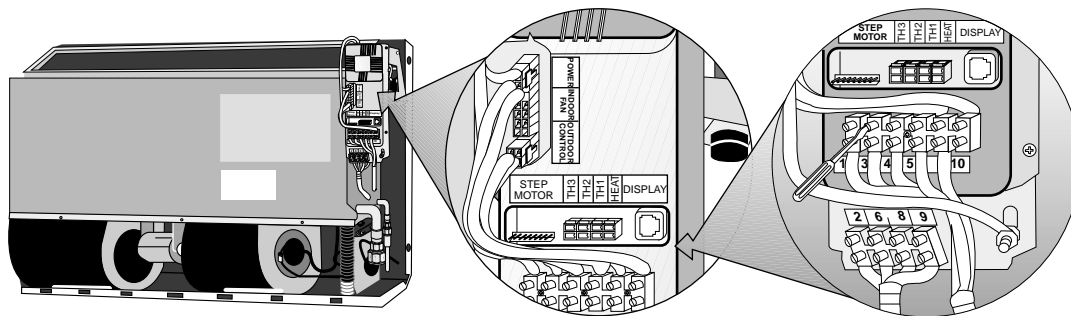
3/4-in. - (72 ft/lb)

5. The valves on the outdoor unit must remain closed until all four connections have been made.

### Step 7—Air Vacuum and Refrigerant Charge

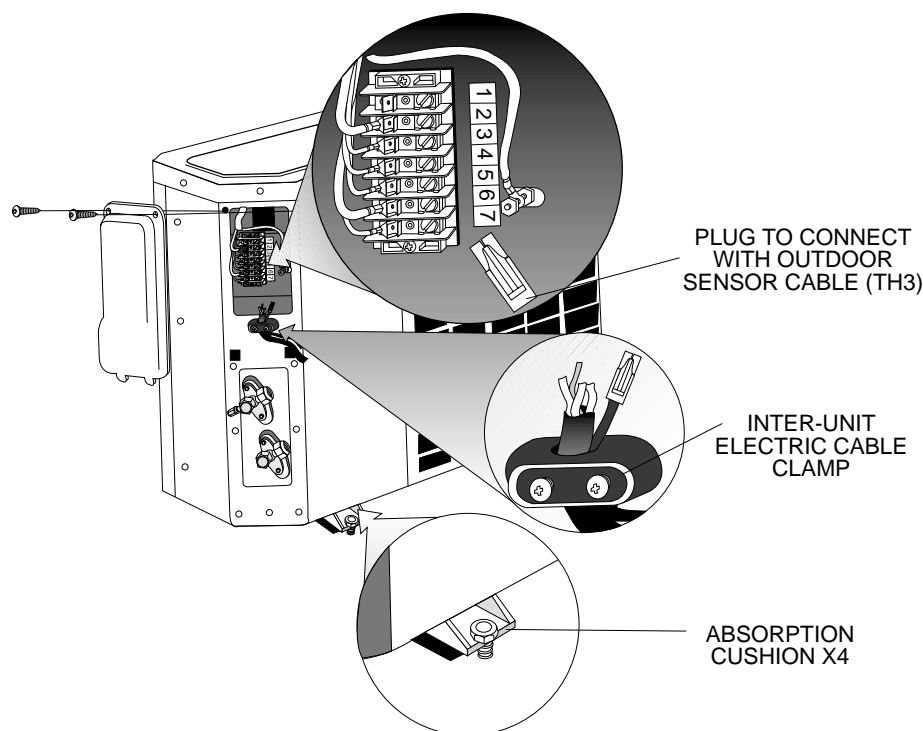
When all the fittings are connected, air must be expelled, as follows:

1. Open the service port cap on the suction line valve (large valve).
2. Connect the vacuum pump to the service port via the pressure gauge and operate the pump for 15 minutes.
3. Make sure that full vacuum is present and disconnect the vacuum pump.



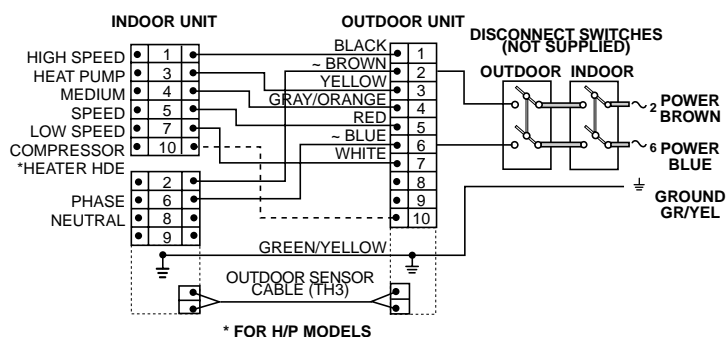
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**Fig. 13—Connecting Wire Ends to Terminal Block**



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**Fig. 14—Outdoor Unit Installation Guideline**



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**Fig. 15—Wiring Diagram Schematic**

4. Open the liquid line valve (small valve) with an Allen wrench.
5. Open the suction line valve (large valve) with an Allen wrench.
6. The outdoor unit is supplied with sufficient refrigerant for 26 ft of tubing. Add 0.9 oz of refrigerant and 0.35 oz of oil for each additional foot of tubing used. If the tubing is shorter than 26 ft, remove gas from the system through the service valve into a recycling device.
7. Close the service port caps on the suction line and the liquid valves.

8. Make sure that the valves are properly opened. Be careful not to open them more than required as this may damage the thread.
9. Replace the stem cap. Oil the cap beam and hand tighten the cap, until resistance is met. Use a suitable wrench to tighten the cap by an additional 1/2 turn.

#### Step 8—Leak Test

Leak test all fittings with appropriate test equipment.

#### Step 9—Electrical Data and Connections

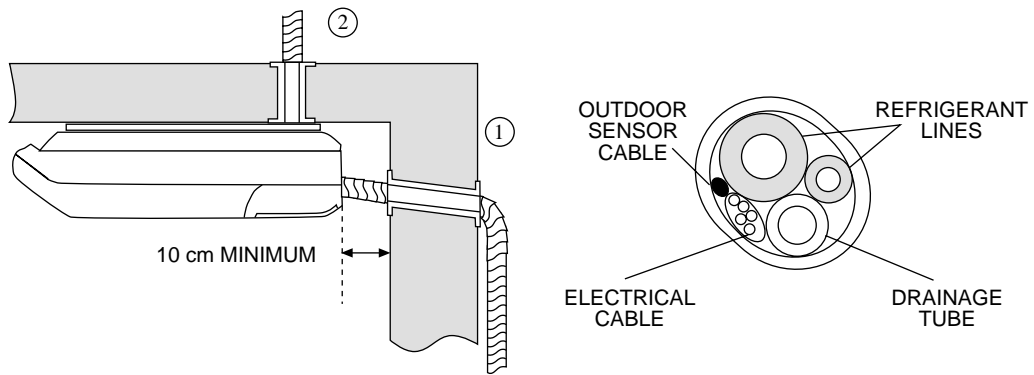
Refer to Table 4 or 5 for unit electrical information.

#### Step 10—Two-Way Air Conditioner (Optional Accessory) —Console Only

**Allows simultaneous air conditioning of adjacent rooms when installed as a console**

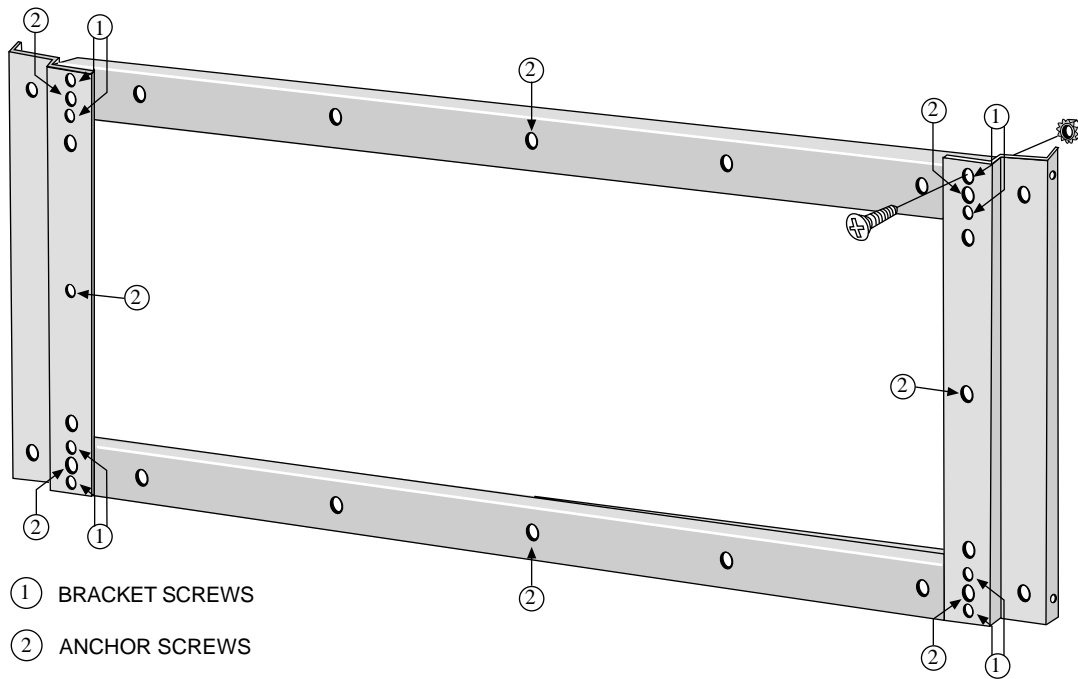
1. Prepare a wooden frame with the proper dimensions. (See Fig. 22.)
2. Locate the indoor unit and install its mounting bracket.
3. Before mounting the indoor unit on the wall, open a hole in the wall to install the wooden frame using the unit as a guide
4. Insert the frame in the wall and fill in any gaps between the frame and the wall hole with an appropriate material.





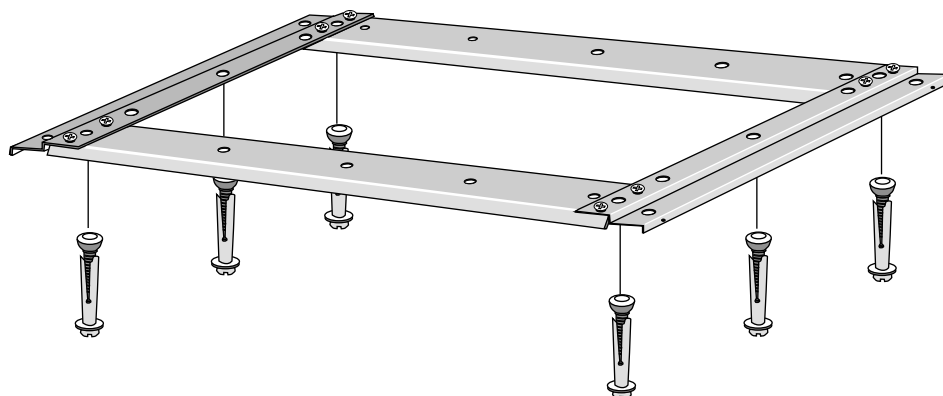
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**Fig. 16—Tubing Routing Options**



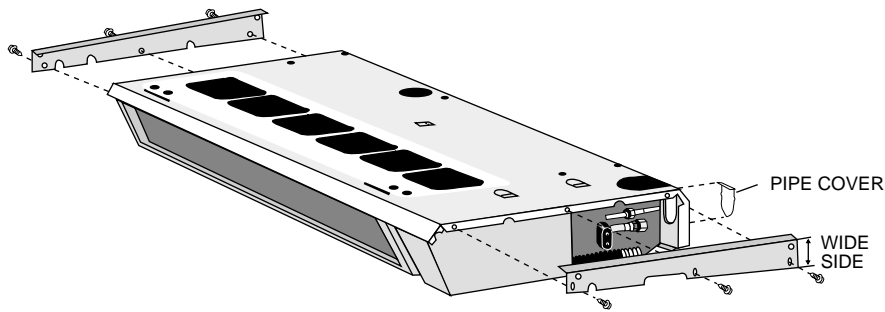
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**Fig. 17—Assembling the Ceiling Bracket**



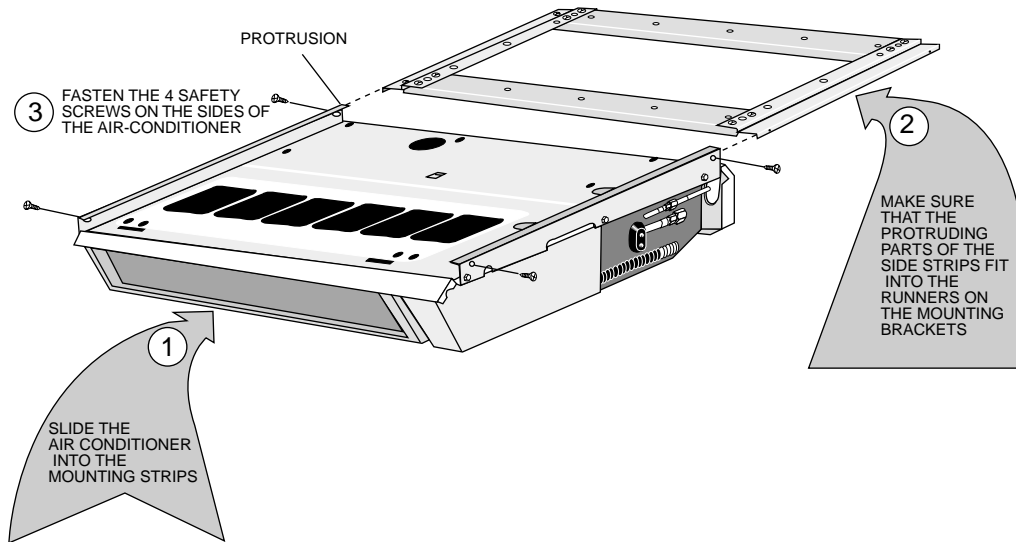
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**Fig. 18—Mounting Ceiling Bracket to Ceiling**



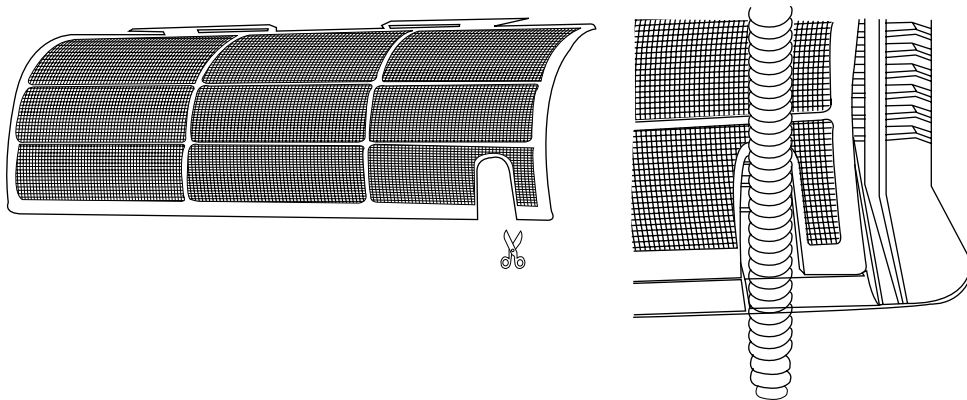
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**Fig. 19—Fastening Left and Right Sides to Air Conditioner**



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**Fig. 20—Mounting Indoor Unit onto Ceiling Bracket**



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**Fig. 21—Drainage Tube Routing Option**

5. Cut the required openings in the insulation material on the back of the unit.
6. Mount the indoor unit on its mounting bracket, as previously described.
7. Seal any gaps between the back of the unit and the wall using a sealing material.
8. Install the grille into the wooden frame and attach it to the frame using two wood screws.
9. Finish the installation by performing all the necessary steps located throughout this instruction.

**Step 11—Air Feedback System Installation (Optional)  
(Two-Way Air Conditioner)**

See Fig. 23.

The air feedback grille is installed when air from the adjacent room is to be sampled by the thermostat when installed as a console.

1. Affix a gasket around the air feedback opening at the rear of the air conditioner (approximately 12-in. from the opening).
2. Drill a hole in the shared wall to insert the return air tube.
3. Mount the indoor unit on its mounting bracket.
4. Insert the tube into the hole until it reaches the opening at the rear of the unit.
5. Insert the grille on the end of the tube.
6. Complete the installation by attaching the plastic frame to the wall using screws.

**Table 4—Electrical Data - Indoor Unit**

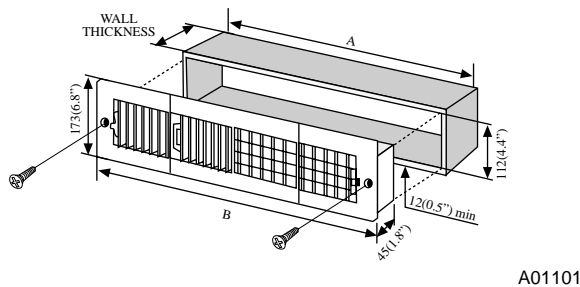
MODEL	40CG-018	40CG-024	40CG-030	40CS-018	40CS-024	40CS-030
MCA	0.8	0.8	0.8	11.5	17.0	17.0
MOCP	15	15	15	20	30	30
Power Supply	208/230V, 60 Hz, 1 Ph					
Full Load Amps	0.6	0.6	0.6	8.9	13.1	13.1
Fan Motor Amps	0.6	0.6	0.6	0.6	0.6	0.6
Electric Heater (watts)	n/a	n/a	n/a	2000	3000	3000
Electric Heater (amps)	n/a	n/a	n/a	8.3	12.5	12.5

Specifications and performance data are subject to change without notice.  
MCA—Minimum Circuit Amps  
MOCP—Maximum Over Current Protection

**Table 5—Electrical Data - Outdoor Unit**

MODEL	40CG-018	40CG-024	40CG-030	40CS-018	40CS-024	40CS-030
MCA	11.4	14.1	19.8	22.1	30.4	36.1
MOCP	15	20	30	25	35	40
Power Supply	208/230V, 60 Hz, 1 Ph					
Fan Motor Amps	1.5	1.5	1.5	1.5	1.5	1.5
Full Load Amps	7.4	9.6	14.2	7.4	9.6	14.2
Locked Rotor Amps	48.0	61.0	94.0	48.0	61.0	94.0

Specifications and performance data are subject to change without notice.  
MCA—Minimum Circuit Amps  
MOCP—Maximum Over Current Protection



OPEN SIZE		BACK OPENINGS					
		2	3	4	5	6	7
A	(in.)	9.1	13.4	17.7	22.1	26.4	30.7
	(mm)	230	340	450	560	670	780
B	(in.)	11.2	15.5	19.85	24.2	28.5	32.8
	(mm)	284	394	504	514	724	834

**Fig. 22—Dimensional Drawing**

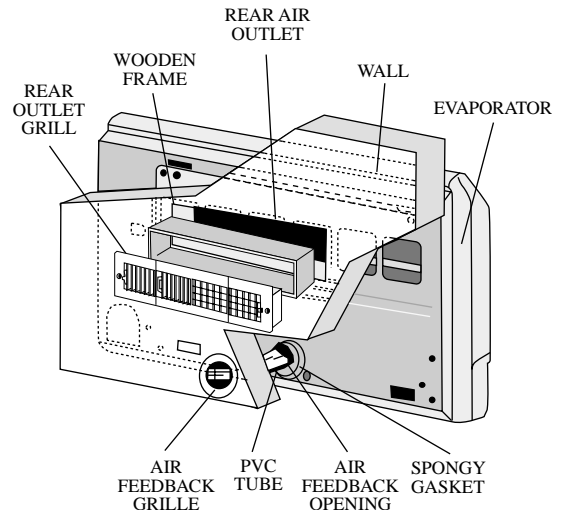
## START-UP PROCEDURES

### Step 1—Finishing the Job

1. Hide the tubing where possible.
2. Make sure that the drainage tube slopes downwards along its entire length.
3. Insulate tubing and connections.
4. Fasten tubes to the outside wall.
5. Seal the hole through which the cables and tubing pass.
6. Connect the air conditioner to the power source and turn it on.
7. Check all air conditioner operating modes. Consult the User Manual.

### INDOOR UNIT

1. Do all the remote controller buttons function properly?
2. Do the display panel lights work properly?
3. Does the air deflection louver function properly?
4. Does the drainage work?



**Fig. 23—Two Way Air Conditioner**

### OUTDOOR UNIT

1. Are there unusual noises or vibrations during operation?
2. Is noise, drain water or air flow from the unit likely to disturb the neighbors?
3. Are there any gas leaks?

EXPLAIN THE FOLLOWING ITEMS TO THE CUSTOMER, WITH THE AID OF THE USER MANUAL:

1. How to turn the air conditioner on and off; selecting cooling, heating and other operating modes; setting a desired temperature; setting the timer to automatically start and stop air conditioner operation; and the other features of the remote controller and display panel.
2. How to remove and clean the air filter.
3. How to set the air deflection louver.
4. Present the User Manual and this installation sheet to the customer.

## CARE AND MAINTENANCE

### Step 1—Maintenance (Outdoor Unit)

#### **⚠ WARNING**

Before performing recommended maintenance, be sure unit main power switch is turned off. Failure to do so may result in electric shock or injury from rotating fan blade.

#### CLEANING COILS

Coil should be washed out with water or blown out with compressed air. Clean coil annually or as required by location and outdoor air conditions. Inspect coil monthly and clean as required. Fins are not continuous through coil sections. Dirt and debris may pass through first section, become trapped between the row of fins and restrict outdoor unit airflow. Use a flashlight to determine if dirt or debris has collected between coil sections.

Clean coil as follows:

1. Turn off unit power
2. Using a garden hose or other suitable equipment, flush coil from the outside to remove dirt. Be sure to flush all dirt and debris from drain holes in base of unit. Fan motors are waterproof.

### Step 2—Maintenance (Indoor Unit)

#### **⚠ CAUTION**

To avoid the possibility of electric shock, before performing any cleaning and maintenance operations, always turn off power to the system by pressing the mode button on the remote control until the display shows "OFF," and turn off the separate disconnect switch located near the unit. If the indoor unit is on a separate switch, be sure to turn this disconnect off as well.

#### **⚠ CAUTION**

Do not wash filter in water over 120°F (to avoid shrinkage). Do not expose filter to fire (to avoid fire damage). Do not expose filter to direct sunlight. Clean filter more frequently when air is extremely dirty.

#### **⚠ CAUTION**

Do not attempt to clean or service components in control box.

#### LUBRICATION

The indoor-fan, automatic air sweep, and the outdoor-fan motors are factory lubricated and require no oiling.

## TO REMOVE AND CLEAN OR REPLACE AIR FILTERS

#### **⚠ CAUTION**

Operating your system with dirty air filters may damage the indoor unit and, in addition, can cause reduced performance, intermittent system operation, frost build up on the indoor coil, and blown fuses. Inspect and clean or replace the air filters monthly.

#### To Remove Air Filters

Remove filters by pulling them straight out.

#### To Clean Or Replace Filters

Filters can be vacuumed or washed in warm water. Shake filter to remove any excess water, and replace by sliding filter behind grille until filter snaps in place. If the filter has begun to break down or is torn, replace it. Replacement filters are available through your Carrier distributor.

#### To Clean Indoor Unit Bottom/Front Panel

If the bottom/front panel of the unit becomes dirty or smudged, wipe the outside of the panel with a soft dry cloth. Use a mild liquid detergent and wipe off carefully with a dry cloth.

#### To Clean Indoor Coil

To clean the coil, remove indoor unit bottom/front panel and vacuum the coil fins, using care not to bend or damage fins.

#### To Clean Condensate Drains

Clean all drains and drain pans at the start of each cooling season. Check the flow by pouring water into the drain.

#### To Clean Or Replace Drain Pan

1. Place a plastic sheet on the floor to catch any water that may spill from drain pan.
2. Remove the intake grille and distribution assembly.
3. Remove the condensate water in the drain pan by letting water drain into a 3-gallon bucket.

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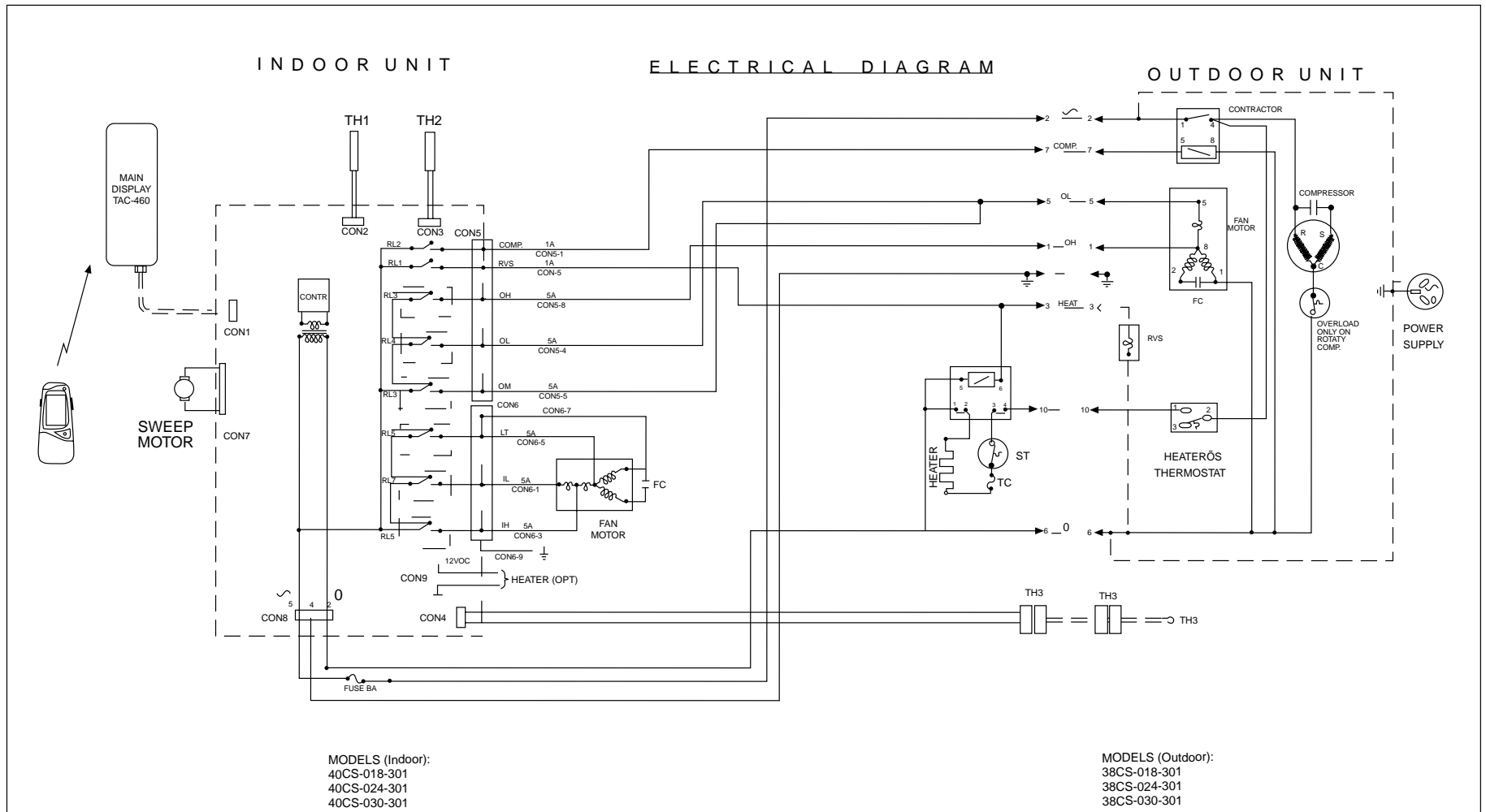


Fig. 25—Wiring Diagram

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# INDOOR UNIT

# ELECTRICAL DIAGRAM

# OUTDOOR UNIT

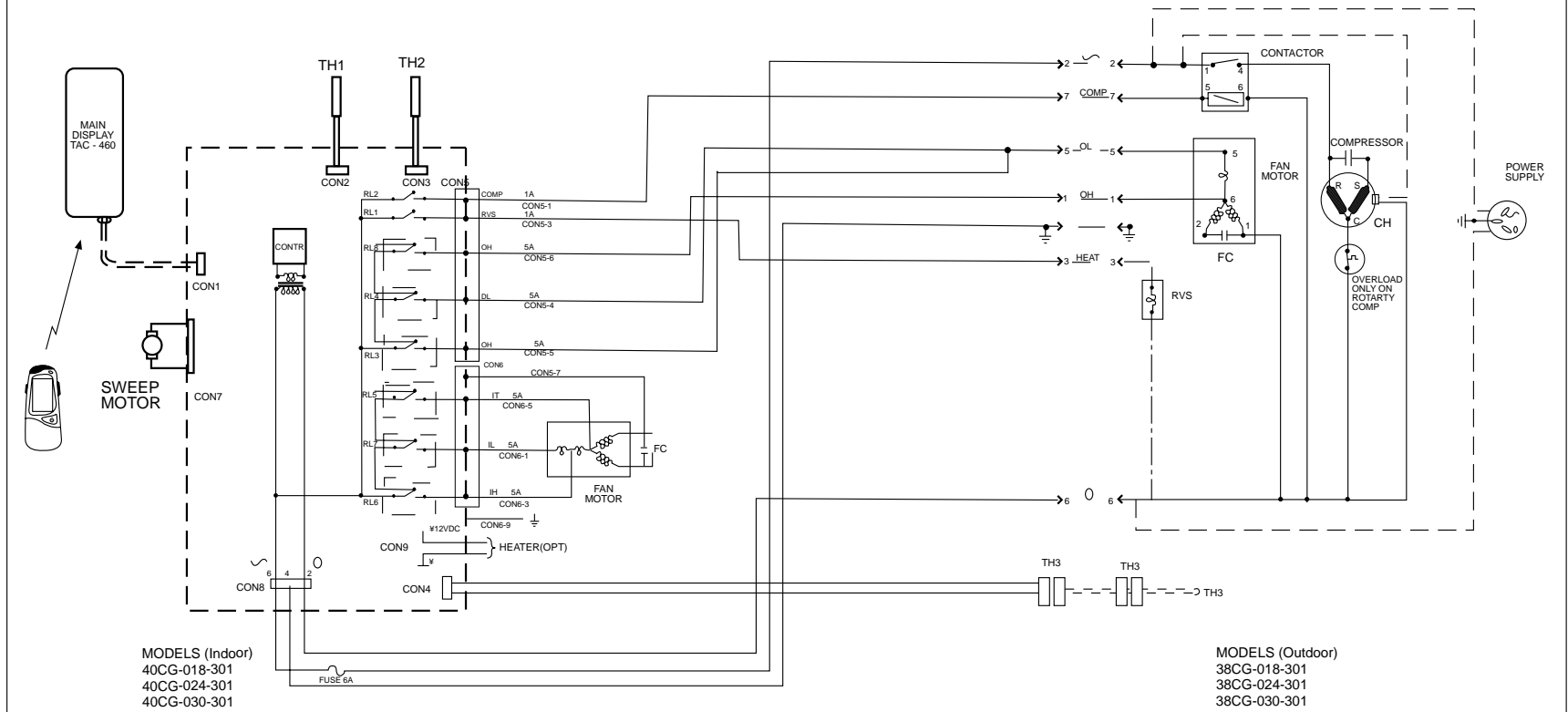


Fig. 27—Wiring Diagram



## TROUBLESHOOTING

**Table 6—Indicator Lamps Troubleshooting**

LAMPS STATUS	INDICATION	CORRECTIVE ACTION
POWER flashes 10 seconds after A/C start-up (with or without other signal lamps)	Communication problem.	<ul style="list-style-type: none"> <li>• Check connection between indoor (TAC-440) and outdoor (TAC-420) units (for TAC-400, ANC).</li> <li>• Check connection between TAC-444 and TAC-460 (for TAC-404).</li> </ul>
POWER, COMPRES. and PRESSURE lamps flash.	Thermistor failure.	<ul style="list-style-type: none"> <li>• Check TH-1 for correct resistance.</li> <li>• Check for proper connection between TH-1 and TAC-444.</li> <li>• Replace TH-1 if necessary.</li> </ul>
POWER, COMPRES. and IMPEDANCE lamps flash.	Thermistor failure.	<ul style="list-style-type: none"> <li>• Check TH-2 for correct resistance.</li> <li>• Check for proper connection between TH-2 and TAC-444.</li> <li>• Replace TH-2 if necessary.</li> </ul>
POWER lamp flashes and PRESSURE is lit, AIR CON is Off.	Low Pressure	<ul style="list-style-type: none"> <li>• Check if the filters are clean.</li> <li>• Check TH-1 and TH-2 for correct resistance.</li> <li>• Check cooling system for normal operation.</li> </ul>
POWER and PRESSURE lamps flash, AIR CON is Off.	High Pressure.	<ul style="list-style-type: none"> <li>• In Heat mode: Check if the evaporator is blocked. (Check if filters are clean.)</li> <li>• Check TH-2 (in Heating mode) or TH-3 (in Cool mode) for correct resistance.</li> <li>• Check cooling system for normal operation.</li> </ul>
FILTER is lit.	Filter cleaning.	<ul style="list-style-type: none"> <li>• Clean all filters.</li> </ul>
POWER, IMPEDANCE lamps flash, COMPRES. is lit.	Low voltage.	<ul style="list-style-type: none"> <li>• Check power supply voltage.</li> <li>• Check electrical connections.</li> <li>• Replace TAC-444.</li> </ul>
POWER lamp flashes, IMPEDANCE and COMPRES. lamps lit. AIR CON lamp flashes after A/C start-up.	Voltage failure at start-up.	<ul style="list-style-type: none"> <li>• Check power supply voltage.</li> <li>• Check electrical connections.</li> <li>• Replace TAC-444.</li> </ul>
POWER lamp flashes, IMPEDANCE and COMPRES. are lit before A/C startup.	High Voltage.	<ul style="list-style-type: none"> <li>• Check power supply voltage.</li> <li>• Check electrical connections.</li> <li>• Replace TAC-444.</li> </ul>
POWER lamp flashes, IMPEDANCE and COMPRES. are lit. AIR CON is lit after A/C startup.	High voltage during compressor operation.	<ul style="list-style-type: none"> <li>• Check power supply voltage.</li> <li>• Check electrical connections.</li> <li>• Replace TAC-444.</li> </ul>

**Table 7—General Troubleshooting Chart**

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
<b>A/C fails to start.</b>	a. Power supply to unit not connected (POWER LED Off).	Check for proper connection of power at disconnect
	b. Fuse Blown (POWER LED Off).	Reset automatic circuit breaker or replace line fuse.
	c. ON/SEND has not been pressed.	Press ON/SEND button on Remote Control, or use the AUTO 3-position slide switch for automatic constant 22°C Set Point (when Remote Control is not available).
	d. Indoor unit does not receive transmitted commands.	Make sure that nothing is blocking the Remote Control transmission to the A/C display.
	e. AUTO-OFF-REMOTE switch is set to Off.	Slide the 3-position switch on the Display to REMOTE (RMOT) position.
<b>Only indoor fan ventilator works, although cooling or heating is desired.</b>	a. The selected mode is on Fan Only, or on Cool when heating is desired.	Check if the Remote Control is on the desired mode. If not, select the correct mode (refer to your User manual). Also note that each 15 minutes (max), the compressor will be switched on for 3 minutes (at least).
	b. Temperature is set to a value which is too high (in Cool mode.)	Observe the temperature setting on the Remote Control. Also note that each 15 minutes (max), the compressor will be switched on for 3 minutes (at least).
<b>Only indoor fan motor and compressor working. Outdoor fan motor stopped.</b>	a. In Heat Mode: Indoor fan motor blocked.	Remove obstruction.
	b. In Cool mode: System runs while evaporator Anti-ice routine take place.	Wait up to 90 seconds until Anti-Ice routine is completed.
<b>In Cool mode: High pressure, or; in Heat mode: Outdoor coil freeze</b>	a. Run capacitor of outdoor fan motor is burnt.	Replace outdoor fan motor run capacitor.
	b. Winding of outdoor fan motor is shorted.	Replace outdoor fan motor.
<b>Only indoor fan motor and outdoor fan motor are working. No cooling and/or heating take place.</b>	a. Overload safety device on compressor is cut out due to high temperature.	Switch Off power and try again after one hour.
	b. Compressor run capacitor is burnt.	Replace compressor run capacitor.
	c. Compressor winding shorted.	Replace compressor.
<b>No air supply at indoor unit (compressor operates).</b>	a. Indoor fan motor is blocked or turns slowly.	1. Check voltage. Repair wiring if necessary. 2. Check indoor fan wheel if tight on motor shaft. Tighten if necessary.
	b. Indoor fan motor capacitor is burnt.	Replace indoor fan motor capacitor.
	c. Indoor fan motor winding is burnt.	Replace indoor fan motor.
	d. In Heat mode: Delayed start for indoor fan motor.	Normal software delay (max. 20 sec)
	e. Clogged air filters.	Clean filters.
<b>Low Capacity.</b>	a. Lack of refrigerant (will be accompanied by whistling noise): Causes ice formation on the evaporator coil (in Cool mode).	Unit must be charged (according to the nameplate) after localizing the gas leak.
	b. Clogged air filters.	Clean filters.
<b>In Heat mode: only compressor runs, outdoor and indoor fan motors are stopped. AIR CON indicator flashes.</b>	A/C operates in De-Icing cycle.	Wait (max.) 10 minutes until the A/C resumes normal operation.

**Note:** Check for broken wires and loose cable lugs first!

**Warning** ⚠ : Always unplug the A/C before performing cleaning or maintenance activities.

**Table 7—General Troubleshooting Chart (Continued)**

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
<b>Water accumulates and overflows from evaporator drain pan.</b>	Drain pan pipe or hose is clogged or the spout of drain pan is clogged.	Disassemble plastic drain-pipe from spout of evaporator drain pan. Flush with clean water.
<b>Water dripping from the condenser base (in Heat mode).</b>	Water drain outlet or the spout is clogged.	Open condenser cover, clean out water outlet, clean the base inside thoroughly.
<b>Unit does not operate in desired mode.</b>	a. The 3-position slide switch on the A/C display is in AUTO or OFF position.	Change the slider position to REMOTE (RMOT).
	b. Faulty Remote Control settings.	1. If Remote Control symbols respond to the commands correctly, check the A/C ID Code (Standard or Alternative). Refer to "Changing A/C ID Code" and to Remote Control DIP switch 3 setting.
		2. If Cool commands are OK, but Heat symbol is skipped on LCD, refer to Remote Control DIP switch 7 setting.
		3. Replace Remote Control.
	c. Remote Control low battery.	Replace Remote Control batteries.
	d. IR detector.	Try shorter distance between Remote Control and A/C. If no response, replace IR detector.
<b>The A/C is interfered by other Remote Control or our Remote Control interfering other instruments.</b>	Common IR Code.	Modify the Remote Control IR transmission code. Refer to "Changing A/C ID Code" and to Remote Control DIP switch 3 setting.
<b>In Cool mode: the unit (compressor) do not start.</b>	a. Faulty TH-3 (outdoor) sensor.	Replace the TH-3 sensor.
	b. Faulty TH-3 Extension Cable (between indoor and outdoor).	Replace TH-3 Extension Cable.

**Note:** Check for broken wires and loose cable lugs first!

**Warning** ⚠ : Always unplug the A/C before performing cleaning or maintenance activities.

